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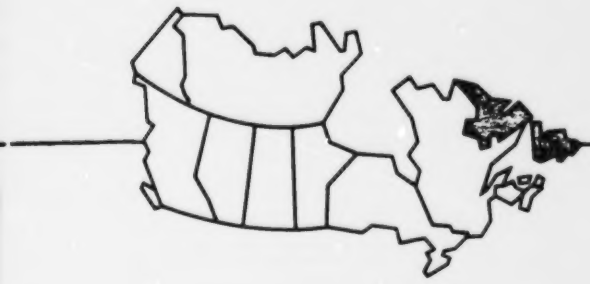
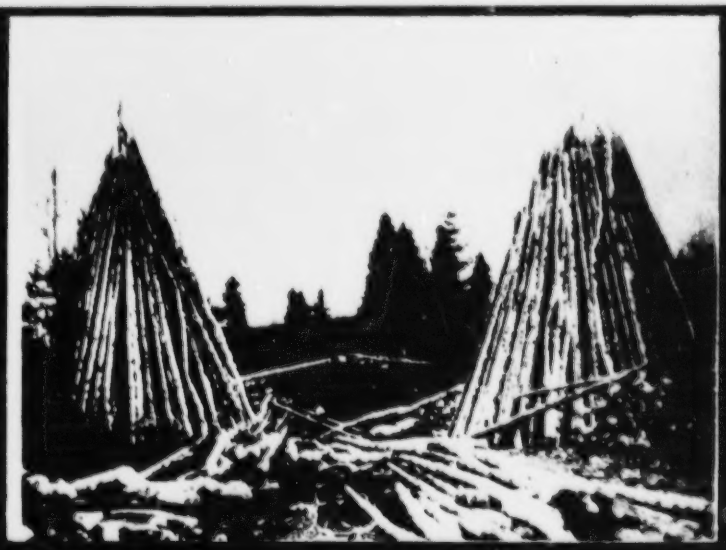
# Newfoundland's forests and forest industry: statistical information 1985 edition

D. Hayden

Information Report N-X-233
Newfoundland Forestry Centre





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# NEWFOUNDLAND'S FORESTS AND FOREST INDUSTRY

# STATISTICAL INFORMATION 1985 EDITION

by Dana Hayden

INFORMATION REPORT N-X-233
1986

CANADIAN FORESTRY SERVICE
NEWFOUNDLAND FORESTRY CENTRE

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**ABSTRACT**

This report has been prepared to meet the demand for Newfoundland forestry statistics, both by resource managers and the general public.

Reliable statistics on forestry and the forest industry play an important role in analysis, planning, and decision making on various forestry programs and policies. Contained within are statistics about geographical details of the forest resource, forest inventory, forest management, commodity production and trade, principal industry groups, federal-provincial forestry agreements, comparative selected economic indicators, and other pertinent aspects of forestry in Newfoundland.

**RÉSUMÉ**

Le présent rapport répond à la demande de statistiques forestières sur Terre-Neuve, demande émanant de la population et des qestionnaires de la ressource.

Dans nombre de politiques et programmes forestiers, l'analyse, la planification et l'exercice du pouvoir décisionnel se fondent sur des statistiques fiables sur la foresterie et l'industrie forestière. On trouvera ici des données statistiques sur les particularités géographiques de la ressource, l'inventaire et la gestion des forêts, la production et le commerce de biens, des statistiques principales par groupes d'industries, les ententes forestières fédérales-provinciales des indicateurs économiques comparés et d'autres aspects pertinents de la foresterie à Terre-Neuve.

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# NEWFOUNDLAND'S FORESTS AND FOREST INDUSTRY

# STATISTICAL INFORMATION 1985 EDITION

by

Dana Hayden

## 1. GEOGRAPHICAL DESCRIPTION OF NEWFOUNDLAND AND LABRADOR[1]

The forests of Newfoundland and Labrador contain approximately 6 437 300 hectares (ha) of merchantable (capable of producing a minimum of 35 $m^3$/ha) timber on a total land area of 15 283 800 ha. Of this productive area, 2 825 500 ha lie on the Island portion of the province. The productive forest lands of Labrador are largely unexploited.

Tenure and occupancy of the productive forest land of the Island is dominated by lease and license holders who collectively hold 46 percent of this area. The provincial Crown holds 42 percent, private holdings account for 10 percent, and 2 percent of these lands are reserved.

Land tenure agreements as they exist today are a culmination of numerous land transactions over decades, beginning with the first recorded timber license in 1887, to the recent sale by Bowater Newfoundland Limited of all private and licensed land holdings to Kruger Inc. (Corner Brook Pulp and Paper Limited). A total of 61 percent of all productive forest land on the Island is occupied by the forest industry. Approximately 75 percent of this land is under lease or license and the rest is privately owned.

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[1]Atter Rowe, J.S., 1959.

**Forest Regions**

The forests of the island of Newfoundland are classified as part of the boreal forest of Canada. The primary forest areas are divided by Rowe into sections B.28a, B.28b and B.29 (refer to Figure 1). The non-forested areas of the Island include the barren sections B.30 and B.31, and the forest tundra section B.32.

Section B.28a roughly encompasses the central portion of the Island, and includes the major species of balsam fir (Abies balsamea (L.) Mill) and black spruce (Picea mariana (Mill.) B.S.P.). These are also the two most important commercial species of the Island. Hardwood species include extensive stands of white birch (Betula papyrifera Marsh.) and trembling aspen (Populus tremuloides Michx). White pine (Pinus strobus L.), red maple (Acer rubrum L.), white spruce (Picea glauca Moench) Voss), and tamarack (Larix laricina (Du Roi) K. Koch) occur throughout this area. Red pine (Pinus resinosa Ait.) occurs on isolated sites.

Section B.28b is characterized by forests similar to those in Section B.28a, except for a greater preponderance of balsam fir and smaller components of black spruce. Balsam fir stands also tend to achieve greater heights in western Newfoundland. Yellow birch (Betula alleghaniensis Britt.) is also widespread in this region. Balsam poplar (Populus balsamifera L.) and black ash (Fraxinus nigra Marsh) occur as minor species.

Section B.29 includes the lowlands of the Northern Peninsula. Generally of lesser forest growth quality, except for two areas located near Hawke's Bay and Roddickton, this area contains those species listed for sections B.28a and B.28b excluding yellow birch, white pine, trembling aspen and red maple.

Section B.30 includes the barrens of eastern Newfoundland. Repeated fires and a cold, wet climate have resulted in vast areas of heath vegetation. Forest areas are confined to sheltered valleys and the deep moraine of the central part of the Avalon Peninsula. Forest composition is similar to that of B.28a, except for the presence of yellow birch and absence of trembling aspen. This forest also has reduced height due mainly to exposure to coastal winds.

Section B.31 is the barren uplands. Vegetation consists mainly of ericaceous shrubs and peat deposit. Rock outcrops are frequent. The forest is characerized by scrubby, wind pruned balsam fir, black spruce and tamarack.

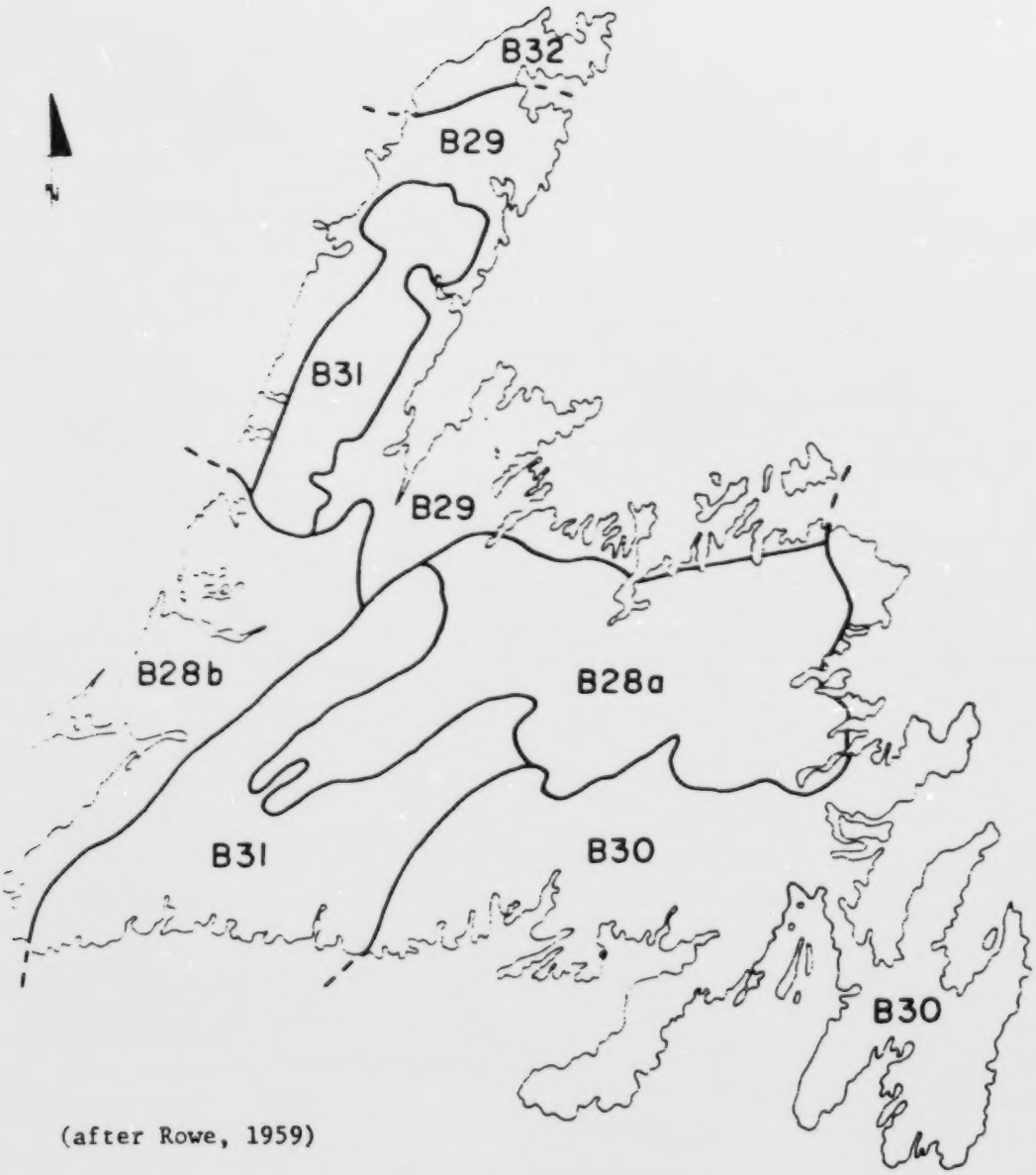


Figure 1. Forest regions of Newfoundland.

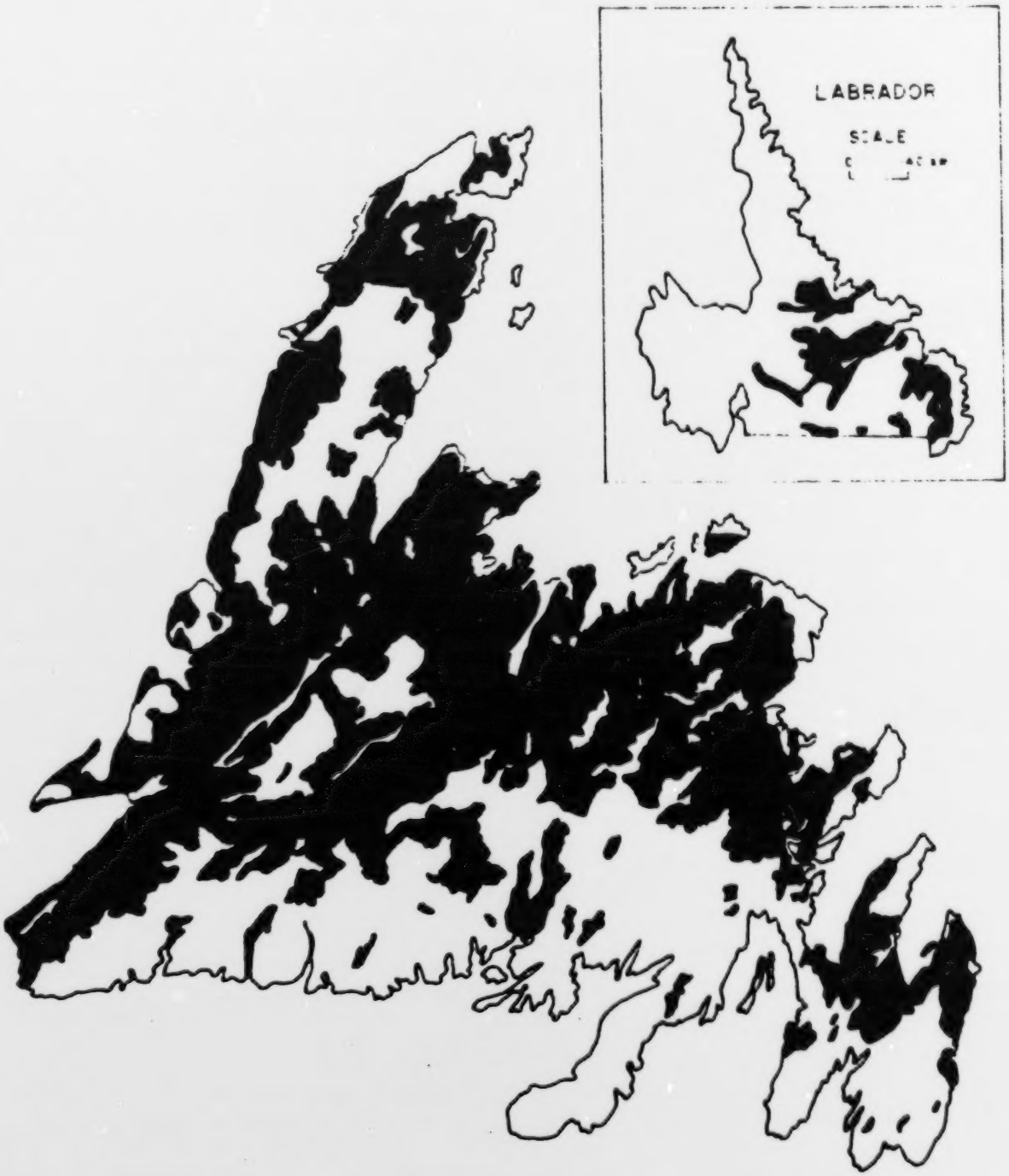


Figure 2. Productive forest area.

Table 1. Land class areas for the inventoried portion of Newfoundland and Labrador.

| Land class | Area hectares* (x 1000) Newfoundland | Labrador** | Total |
|---|---|---|---|
| Productive*** | 2 825.5 | 3 611.8 | 6 437.3 |
| Non-Productive | 1 941.5 | 2 855.4 | 4 796.9 |
| Water | 575.6 | 701.5 | 1 277.1 |
| Non-Forested | (1 819.1) | (953.4) | (2 772.5) |
| Soil barren | 383.4 | 164.3 | 547.7 |
| Rock Barren | 298.5 | 256.1 | 554.6 |
| Bog | 1 075.7 | 526.9 | 1,602.6 |
| Cleared Land | 20.3 | 6.1 | 26.4 |
| Agricultural Land | 11.9 | - | 11.9 |
| Residential | 23.8 | - | 23.8 |
| Rights-of-way | 5.5 | - | 5.5 |
| Total | 7 61.7 | 8 122.1 | 15 283.8 |

*Data Source: Management Unit Inventory for island portion of Province and global inventory for Labrador.

**Excludes lands north of 56°N longitude and inventory regions 15, 16 and 17.

***Land capable of producing more than 35 $m^3$/ha.

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

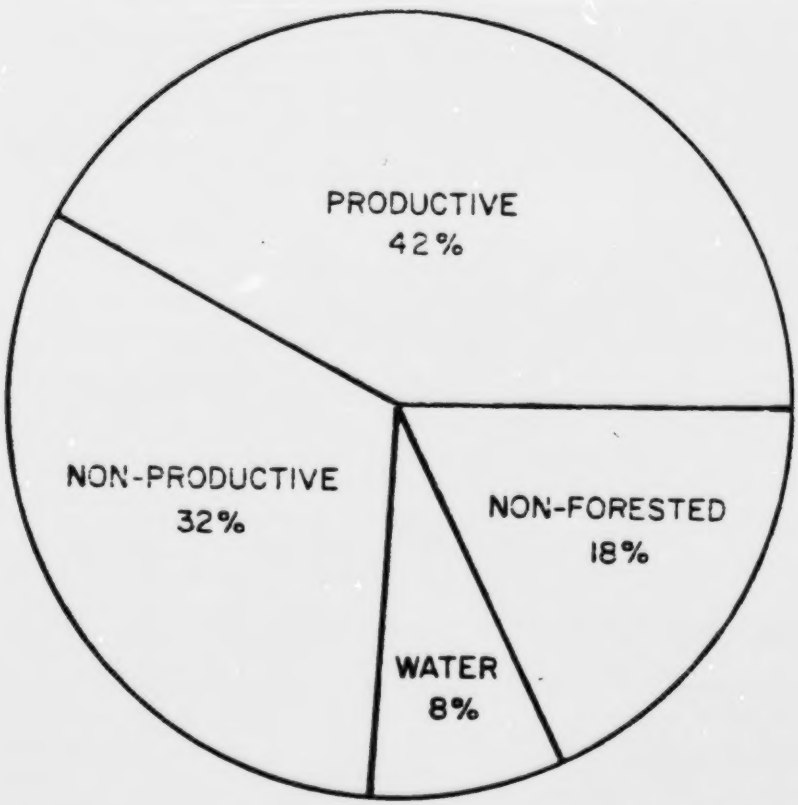


Figure 3. Land class area for the inventoried portion of Newfoundland and Labrador.

## 2. FOREST MANAGEMENT, SILVICULTURE AND PROTECTION

The land area in Newfoundland and Labrador which is managed for forestry uses has been divided for management purposes by the Provincial Department of Forest Resources and Lands into 19 units. Eighteen units are on the Island and the nineteenth unit is in Labrador. These units encompass crown, lease, license, private and reserved lands. Crown lands represent 42 percent of the productive forest land base, while 46 percent is held under lease or license, 10 percent is privately held and two percent is reserved land.

Timber harvests are primarily of softwood species with a small amount of hardwood cut primarily for lumber or domestic fuelwood uses.

Silvicultural activities include site preparation, planting and seeding, herbicide treatments, precommercial thinnings, site reclamation and other forest improvement activities. From 1975 to 1984 increasing numbers of hectares were treated under all of these operations. Similarly, nursery production has been greatly increased to keep up with an increasing planting program.

Fire and the spruce budworm have taken their toll in Newfoundland and Labrador. The year 1985 was a particularly destructive fire season burning 159 744 hectares of forest, while the recent spruce budworm infestation resulted in approximately 50 million cubic metres of dead or dying timber volume. In addition to lost volumes of timber, control measures have been costly. By 1983 an estimated 15 million dollars had been spent in budworm chemical spray alone in Newfoundland (1983 dollars).

Figure 4. Provincial forest management units.

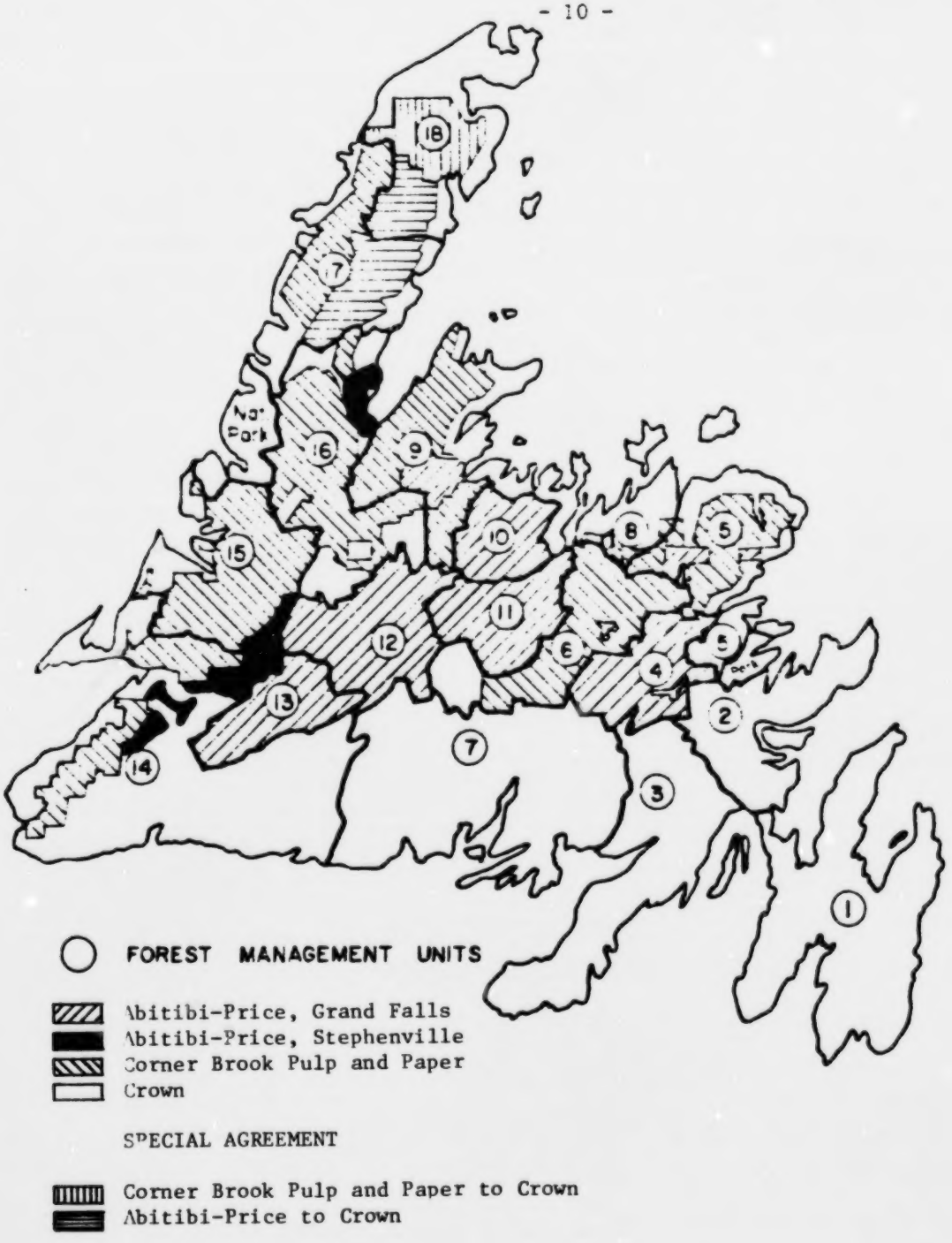


Figure 5. Occupancy of the productive forest area of the island of Newfoundland.

Table 2. Tenure and occupancy of the productive forest area of the island of Newfoundland.

| Type of land holding | Area ('000 ha) | Percent of productive forest land |
|---|---|---|
| **Tenure** | | |
| Lease/Licence | 1 299.7 | 46 |
| Crown | 1 186.7 | 42 |
| Private | 282.6 | 10 |
| Reserved | 56.5 | 2 |
| Total | 2 825.5 | 100 |
| **Occupancy** | | |
| Corner Brook Pulp and Paper Co. | 1 007.9 | 35 |
| Abitibi-Price Inc. (Grand Falls) | 639.7 | 23 |
| Abitibi-Price Inc. (Stephenville) | 76.3 | 3 |
| Crown | 1 049.1 | 37 |
| Other | 52.5 | 2 |
| Total | 2 825.5 | 100 |

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

Table 3. Total Volume Harvested - Province of Newfoundland.

| Year | Cubic metres | | |
|---|---|---|---|
| | Total | Softwood | Hardwood |
| 1950 | 3 187 910 | 3 076 333 | 111 577 |
| 1951 | 3 423 989 | 3 304 149 | 119 840 |
| 1952 | 2 894 383 | 2 793 079 | 101 304 |
| 1953 | 3 223 087 | 3 110 278 | 112 809 |
| 1954 | 2 826 604 | 2 727 672 | 98 932 |
| 1955 | 3 180 690 | 3 069 365 | 111 325 |
| 1956 | 2 971 132 | 2 867 142 | 103 990 |
| 1957 | 2 763 778 | 2 667 045 | 96 733 |
| 1958 | 2 376 040 | 2 292 878 | 83 162 |
| 1959 | 2 736 469 | 2 640 692 | 95 777 |
| 1960 | 3 585 670 | 3 460 171 | 125 499 |
| 1961 | 2 773 796 | 2 676 713 | 97 083 |
| 1962 | 2 112 567 | 2 038 627 | 73 940 |
| 1963 | 2 519 464 | 2 431 282 | 88 182 |
| 1964 | 2 739 440 | 2 643 559 | 95 881 |
| 1965 | 2 796 300 | 2 698 429 | 97 871 |
| 1966 | 2 841 716 | 2 742 255 | 99 461 |
| 1967 | 2 444 922 | 2 357 419 | 87 503 |
| 1968 | 2 359 456 | 2 276 875 | 82 581 |
| 1969 | 2 354 928 | 2 272 505 | 82 423 |
| 1970 | 2 849 000 | 2 749 285 | 99 715 |
| 1971 | 2 322 860 | 2 241 559 | 81 301 |
| 1972 | 2 353 700 | 2 271 320 | 82 380 |
| 1973 | 2 950 280 | 2 847 020 | 103 260 |
| 1974 | 3 209 220 | 3 096 897 | 112 323 |
| 1975 | 2 450 780 | 2 365 003 | 85 777 |
| 1976 | 2 326 187 | 2 292 787 | 33 400 |
| 1977 | 2 196 134 | 2 121 107 | 75 027 |
| 1978 | 2 288 359 | 2 215 594 | 72 765 |
| 1979 | 2 479 827 | 2 362 364 | 117 463 |
| 1980 | 2 795 188 | 2 660 188 | 135 000 |
| 1981 | 2 568 000 | 2 478 120 | 89 880 |
| 1982 | 2 379 000 | 2 295 735 | 83 265 |
| 1983 | 2 400 000 | 2 316 000 | 84 000 |
| 1984 | 2 500 000 | 2 412 500 | 87 500 |

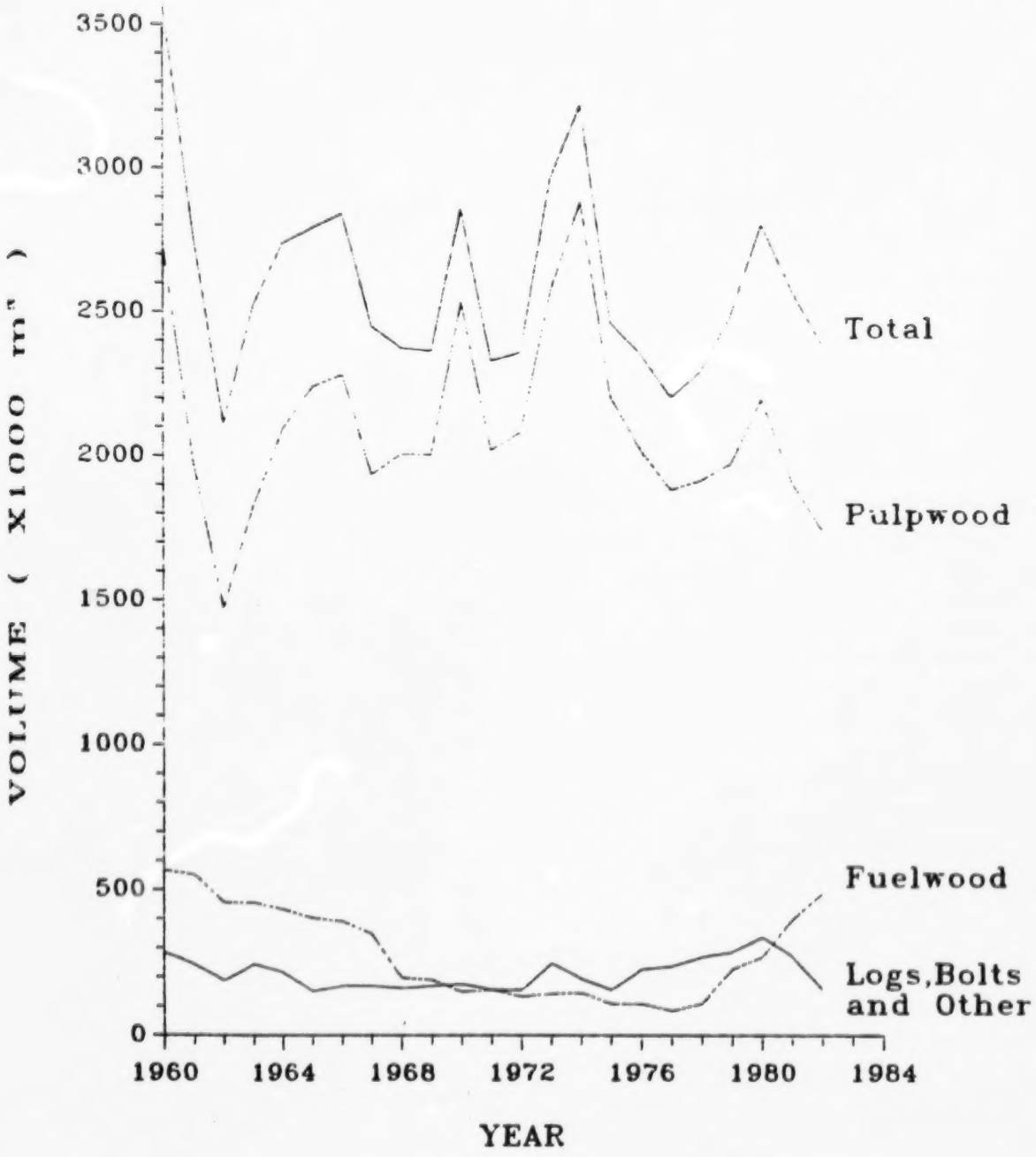


Figure 6. Roundwood production.

Table 4. Silvicultural performance 1975-84.

| Phase | Treatment Area (ha), Industry and Crown | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1975-79 | 1980 | 1981 | 1982 | 1983 | 1984 | 1980-84 | 1975-84 |
| ***Seedlings** | | 0.62 | 2.10 | 3.86 | 4.20 | 5.69 | 16.47 | |
| **Tree Planting** | | | | | | | | |
| - Crown | 127 | 234 | 347 | 410 | 612 | 1 200 | 2 804 | |
| - Industry | 57 | 118 | 427 | 1 194 | 987 | 1 512 | 4 238 | |
| Sub-Total | 184 | 352 | 774 | 1 604 | 1 599 | 2 712 | 7 041 | 7 225 |
| **Site Preparation** | | | | | | | | |
| - Crown | 1 856 | 228 | 379 | 360 | 316 | 1 200 | 2 503 | |
| - Industry | - | 98 | 852 | 1 226 | 1 333 | 1 804 | 5 313 | |
| Sub-Total | 1 856 | 326 | 1 231 | 1 586 | 1 649 | 3 024 | 7 816 | 9 672 |
| **Site Reclamation** | | | | | | | | |
| - Crown | 2 258 | 1 660 | 2 154 | 1 183 | 1 505 | 1 793 | 8 295 | |
| - Industry | - | - | - | 291 | 188 | 360 | 839 | |
| Sub-Total | 2 258 | 1 660 | 2 154 | 1 474 | 1 693 | 2 153 | 9 134 | 11 392 |
| **Pre-Commercial Thinning** | | | | | | | | |
| - Crown | 4 760 | 1 237 | 591 | 891 | 786 | 838 | 4 343 | |
| - Industry | 1 225 | 455 | 2 428 | 2 673 | 2 866 | 3 101 | 11 523 | |
| Sub-Total | 5 985 | 1 692 | 3 019 | 3 564 | 3 652 | 3 939 | 15 866 | 21 851 |
| **Miscellaneous** | 483 | - | - | - | - | - | - | 483 |
| TOTAL | 10 766 | 4 030 | 7 178 | 8 228 | 8 593 | 11 828 | 39 858 | 51 042 |

*Tree Production ('000,000).

Source: Silviculture and Research Division, Silvicultural Registry, Newfoundland and Labrador Department of Forest Resources and Lands.

Table 5. Nursery Production.

| Year | Shippable Trees ('000's) | Type |
|---|---|---|
| 1980 | 825 | C* |
| | 151 | B* |
| 1981 | 1 296 | C |
| | 1 165 | B |
| 1982 | 1 627 | C |
| | 2 243 | B |
| 1983 | 2 649 | C |
| | 2 100 | B |
| 1984 | 2 439 | C |
| | 3 242 | B |
| 1985 | 2 788 | C |
| | 3 103 | B |

*C - Container stock.
*B - Bareroot stock.

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

Table 6. Forest Fire Statistics - Newfoundland and Labrador.

| Year | No. of fires | Area burned (hectares) | Estimated value of lost timber | Fire fighting costs |
|---|---|---|---|---|
| | | | $000's | |
| 1980 | 60 | 953 | 120 | 420 |
| 1981 | 131 | 14 168 | 698 | 665 |
| 1982 | 165 | 4 392 | 60 | 130 |
| 1983 | 138 | 16 887 | 24 | 50 |
| 1984 | 121 | 7 791 | N.A. | 1 582 |
| 1985 | 310 | 159 744 | N.A. | 2 247 |

N.A. - Not available.

Source: "Selected Forestry Statistics" Canada, 1984, Canadian Forestry Service.

"Selected Forestry Statistics", Newfoundland and Labrador, Department of Forest Resources and Lands.

Table 7. 1983 Spruce budworm damage assessment for Newfoundland.

| | Total area (ha) | Dead volume ($m^3$) | Dying volume ($m^3$) | Total stand volume ($m^3$) |
|---|---|---|---|---|
| **1) Cumulative area and volume in predominantly balsam fir and predominantly black spruce stands** | | | | |
| Balsam fir | 388 600 | 19 905 000 | 1 984 000 | 40 441 000 |
| Black spruce | 95 700 | 3 194 000 | 915 000 | 10 322 000 |
| Total | 484 300 | 23 099 000 | 2 899 000 | 50 763 000 |
| **2) Salvage area and volume** | | | | |
| Balsam fir | 43 500 | | | 4 004 000 |
| Black spruce | 16 200 | | | 1 620 000 |
| Total | 59 700 | | | 5 624 000 |
| **3) Burn area and volume** | | | | |
| Balsam fir | 2 600 | | | 237 000 |
| Black spruce | 3 500 | | | 325 000 |
| Total | 6 100 | | | 562 000 |
| **4) Blowdown area and volume** | | | | |
| Balsam fir | 58 200 | | | 5 912 000 |
| Black spruce | 5 100 | | | 510 000 |
| Total | 63 300 | | | 6 422 000 |
| **5) Existing area and volume** | | | | |
| Balsam fir | 284 300 | 10 559 000 | 1 984 000 | 30 288 000 |
| Black spruce | 70 900 | 4 407 000 | 915 000 | 7 867 000 |
| Total | 355 200 | 14 966 000 | 2 899 000 | 38 155 000 |
| **6) Salvageable area and volume** | | | | |
| Balsam fir | 284 300 | 6 611 000 | 1 984 000 | 26 340 000 |
| Black spruce | 70 900 | 4 049 000 | 915 000 | 7 509 000 |
| Total | 355 200 | 10 660 000 | 2 899 000 | 33 849 000 |

Source: Hudak, J.; Raske, A.G.; Lim, K.P.; Clarke, L.J. 1983. The spruce budworm in Newfoundland in 1983, Canadian Forestry Service.

Table 8. Spruce budworm chemical spray costs for Newfoundland from 1977 to 1983.

| Year | Area sprayed (ha)* | Estimated cost/ha dollars | Total cost in current dollars | Total cost in 1983 dollars** |
|---|---|---|---|---|
| 1983 | 138 000 | 10.70 | 1 476 780 | 1 476 780 |
| 1982 | 85 000 | 11.70 | 994 500 | 1 053 176 |
| 1981 | 344 000 | 10.42 | 3 584 480 | 4 262 868 |
| 1980 | 15 000 | 8.00 | 120 000 | 162 976 |
| 1979 | 6 000 | 7.20 | 43 200 | 66 299 |
| 1978 | 737 000 | 6.40 | 4 716 800 | 7 897 551 |
| 1977 | 80 000 | 5.90 | 472 000 | 855 885 |
| Total | 1 405 000 | | | 15 775 535 |

* Area sprayed accounts for stands sprayed twice. Thus, if an area is treated twice, the total area sprayed equals twice the original area.

** Values in 1982 dollars are calculated using the National Accounts Implicit Price Index for government expenditure.

Source: Milne, G.R. 1985. Economic impact of the spruce budworm outbreak in Newfoundland. Unpublished report.

## 2. NEWFOUNDLAND FOREST INDUSTRY

The bulk of the Newfoundland forest industry is concentrated on the island portion of the Province. The most important sector is the pulp and paper industry. Secondary in importance is the sawmilling and miscellaneous woodworking industries.

There are three pulp and paper mills in Newfoundland. Two are operated by Abitibi-Price Inc., one at Grand Falls, and the other at Stephenville. The third is operated by Kruger Inc. and is Corner Brook Pulp and Paper Limited located in Corner Brook. The three mills had a combined capacity of 670 720 metric tonnes in 1984, which represents a pulpwood consumption of approximately 1 661 139 $m^3$.

**Abitibi-Price, Grand Falls**

This mill began production in 1909 and has gradually expanded capacity from 27 000 tonnes to the current 234 000 tonnes. Newsprint production in 1984 was 233 871 tonnes representing 96 percent capacity utilization and softwood consumption of approximately 629 114 $m^3$. While the mill is old, Abitibi-Price has undertaken a $48 million modernization program for the mill to be completed in late 1986.

**Abitibi-Price, Stephenville**

The conversion of the Stephenville mill from kraft linerboard to newsprint was completed in 1981. Current mill capacity is 148 922 tonnes. Newsprint production in 1984 was 150 498 tonnes, which reflects 101 percent capacity utilization and softwood consumption of approximately 417 946 $m^3$. This mill is the most efficient of the three mills

in Newfoundland with labour input per tonne of newsprint roughly one-half the rate for the Grand Falls and Corner Brook mills.

**Corner Brook Pulp and Paper Limited.**

Bowater Newfoundland began operating this mill in 1925 with a capacity of 127 000 tonnes. Capacity increased over time to 368 300 tonnes in 1981. In 1982 however, the mill's largest newsprint machine was permanently shut down, leaving 1983 capacity at 265 750 tonnes. In 1984, the mill was sold to Kruger Inc. who have initiated a $221 million modernization program for the mill.

Newsprint production in 1984 was 263 410 tonnes, representing 94 percent capacity utilization and softwood consumption of approximately 614 078 $m^3$. Virtually all of the newsprint manufactured in Newfoundland is sold outside of Canada with the major markets being the United States and Europe. Newsprint shipments account for approximately 25 percent of the total value of exports from Newfoundland. Nationally, in 1983 newsprint shipments from Newfoundland accounted for 6.9 percent of Canada's total.

The pulp and paper industry is very important to economies of three of the largest communities in Newfoundland - Grand Falls, Corner Brook, and Stephenville. A significant portion of direct and indirect employment in and around these centres is attributed to the mills. Annual direct person years of employment in the forest industry is

estimated at 515 in Stephenville, 1 321 in Grand Falls, and 2 285 in Corner Brook.

The Newfoundland sawmill industry consists of about 1 850 small independent mills. In 1983, the total output was about 77 500 $m^3$ or about half the provincial requirement. Approximately half of the lumber is manufactured by 1 700 mills which average only 24 $m^3$ per year. Only seven mills were capable of producing more than 11 800 $m^3$ per year. The 1 800 sawmills are widely distributed throughout the Crown land portion of the Island and in some forested locations in Labrador.

The remaining wood industry activity is concentrated around the miscellaneous wood working sector. This sector consists of approximately 90 plants of various sizes manufacturing a wide range of wood products. In 1981, 521 people were directly employed in the industry earning a total income of $9.5 million. The total value added was $20.7 million and the value of shipments was $33.8 million. With the introduction of local kiln drying technology and assuming modest improvements to the sawmill industry, the long-term outlook of the woodworking sector is optimistic.

Table 9. Principal statistics for the logging industry

| Year | Number of establish. | Production-Related-Workers | | | Cost of fuel & electricity | Cost of mat. and supplies | Value of shipments | Value added | Total Employees | | Value added |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Man hours '000 | Wages $ '000 | Thousands of dollars | | | | Number | Income $ '000 | $ '000 |
| 1970 | 29.0 | 2 199.0 | 5 311.0 | 14 959.0 | 1 672.0 | 7 780.0 | 31 178.0 | 22 695.0 | 2 439.0 | 16 976.0 | 22 933.0 |
| 1971 | 24.0 | 1 590.0 | 3 805.0 | 11 369.0 | 1 538.0 | 4 738.0 | 23 174.0 | 18 567.0 | 1 778.0 | 13 330.0 | 18 867.0 |
| 1972 | 18.0 | 1 612.0 | 3 915.0 | 12 663.0 | 1 493.0 | 5 614.0 | 30 785.0 | 23 855.0 | 1 881.0 | 15 324.0 | 24 432.0 |
| 1973 | 32.0 | 2 156.0 | 4 856.0 | 17 764.0 | 1 996.0 | 11 784.0 | 40 520.0 | 28 997.0 | 2 404.0 | 20 369.0 | 29 293.0 |
| 1974 | 33.0 | 2 275.0 | 5 151.0 | 21 454.0 | 3 097.0 | 19 328.0 | 54 406.0 | 36 933.0 | 2 579.0 | 24 913.0 | 37 427.0 |
| 1975 | 36.0 | 2 025.0 | 4 556.0 | 23 312.0 | 2 653.0 | 17 140.0 | 53 575.0 | 36 344.0 | 2 319.0 | 27 082.0 | 36 628.0 |
| 1976 | 26.0 | 1 342.0 | 2 743.0 | 18 040.0 | 2 236.0 | 17 504.0 | 59 383.0 | 31 857.0 | 1 588.0 | 21 626.0 | 32 463.0 |
| 1977 | 17.0 | 1 436.0 | 2 943.0 | 20 838.0 | 1 790.0 | 12 512.0 | 52 660.0 | 39 528.0 | 1 625.0 | 24 631.0 | 39 999.0 |
| 1978 | 13.0 | 1 138.0 | 2 328.0 | 17 863.0 | 1 954.0 | 14 770.0 | 52 431.0 | 36 492.0 | 1 324.0 | 21 858.0 | 37 251.0 |
| 1979 | 19.0 | 1 267.0 | 2 557.0 | 21 008.0 | 2 401.0 | 20 127.0 | 61 557.0 | 38 618.0 | 1 503.0 | 25 474.0 | 39 334.0 |
| 1980 | 25.0 | 1 309.0 | 2 637.0 | 22 680.0 | 2 881.0 | 26 218.0 | 67 476.0 | 44 126.0 | 1 572.0 | 27 967.0 | 45 017.0 |
| 1981 | 23.0 | 1 318.0 | 2 594.0 | 26 452.0 | 3 209.0 | 37 669.0 | 89 422.0 | 51 016.0 | 1 580.0 | 33 254.0 | 52 324.0 |
| 1982 | 23.0 | 1 350.0 | 2 630.0 | 28 169.0 | 5 063.0 | 40 385.0 | 97 113.0 | 54 333.0 | 1 614.0 | 35 403.0 | 54 744.0 |

Source: Statistics Canada Catalogue 25-202.

Table 10. Principal statistics for the pulp and paper industry.

| Year | Number of establish. | Production-Related-Workers | | | Cost of fuel & electricity | Cost of mat. and supplies | Value of shipments | Value added | Total Employees | | Value added |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Man hours '000 | Wages $ '000 | Thousands of dollars | | | | Number | Income $ '000 | $ '000 |
| 1970 | 2.0 | 2 379.0 | 5 664.0 | 22 064.0 | 6 613.0 | 37 039.0 | 78 670.0 | 35 921.0 | 2 823.0 | 26 872.0 | 36 070.0 |
| 1971 | 2.0 | 2 138.0 | 4 711.0 | 19 847.0 | 5 253.0 | 29 402.0 | 64 943.0 | 31 655.0 | 2 568.0 | 24 757.0 | 31 782.0 |
| 1973 | 3.0 | 2 590.0 | 6 408.0 | 29 434.0 | 8 764.0 | 60 394.0 | 119 959.0 | 54 306.0 | 3 151.0 | 36 645.0 | 54 662.0 |
| 1974 | 3.0 | 2 665.0 | 6 584.0 | 35 137.0 | 14 268.0 | 70 093.0 | 189 725.0 | 104 631.0 | 3 326.0 | 44 159.0 | 104 422.0 |
| 1975 | 3.0 | 2 299.0 | 5 428.0 | 31 821.0 | 13 426.0 | 59 498.0 | 146 880.0 | 73 736.0 | 2 903.0 | 41 120.0 | 63 698.0 |
| 1976 | 3.0 | 2 634.0 | 5 658.0 | 42 104.0 | 15 870.0 | 78 258.0 | 170 380.0 | 74 955.0 | 3 252.0 | 52 384.0 | 64 383.0 |
| 1977 | 2.0 | 2 216.0 | 5 091.0 | 41 486.0 | 12 996.0 | 53 176.0 | 202 451.0 | 102 297.0 | 2 624.0 | 48 047.0 | 102 000.0 |
| 1978 | 2.0 | 2 152.0 | 4 979.0 | 46 068.0 | 16 942.0 | 70 220.0 | 226 817.0 | 142 182.0 | 2 538.0 | 53 071.0 | 141 801.0 |
| 1979 | 2.0 | 2 198.0 | 5 059.0 | 52 563.0 | 19 419.0 | 90 070.0 | 261 945.0 | 161 984.0 | 2 611.0 | 62 842.0 | 161 075.0 |
| 1980 | 2.0 | 2 226.0 | 5 101.0 | 61 078.0 | 23 439.0 | 100 248.0 | 280 214.0 | 164 454.0 | 2 657.0 | 62 954.0 | 163 479.0 |
| 1981 | 3.0 | 2 545.0 | 4 309.0 | 66 590.0 | 24 638.0 | 106 619.0 | 330 425.0 | 196 825.0 | 2 981.0 | 73 750.0 | 194 049.0 |
| 1982 | 3.0 | 2 404.0 | 5 420.0 | 69 755.0 | 26 070.0 | 118 222.0 | 322 900.0 | 167 338.0 | 2 842.0 | 82 899.0 | 163 922.0 |

Source: Statistics Canada Catalogue 25-202.

Table 11. Sales and value of newsprint

| Year | Newsprint (tonnes) | Value (millions of dollars) | Linerboard* (tonnes) | Value (millions of dollars) |
|---|---|---|---|---|
| 1970 | 619 081 | 93.3 | | |
| 1971 | 486 261 | 76.2 | | |
| 1972 | 526 872 | 82.1 | | |
| 1973 | 624 967 | 114.5 | 90 178 | 15.6 |
| 1974 | 571 487 | 148.3 | 159 675 | 50.8 |
| 1975 | 432 379 | 133.3 | 97 725 | 30.6 |
| 1976 | 465 826 | 151.3 | 99 750 | 27.5 |
| 1977 | 558 389 | 201.6 | 122 973 | 25.6 |
| 1978 | 561 436 | 222.1 | | |
| 379 | 597 099 | 253.7 | | |
| 1980 | 646 527 | 270.3 | | |
| 1981 | 675 118 | 335.5 | | |
| 1982 | 612 050 | 322.9 | | |
| 1983 | 557 322 | 265.1 | | |
| 1984 | 646 306 | 315.1 | | |
| 1985 | 599 701 | 301.9 | | |

*Labrador Linerboard ceased operations in 1977.

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

Table 12. Dunnage* Statistics.

| Year | Volume ($m^3$) | Value ($) |
|---|---|---|
| 1970 | 3 359 | 134 799 |
| 1971 | 2 819 | 123 897 |
| 1972 | 3 432 | 170 569 |
| 1973 | 3 110 | 185 606 |
| 1974 | 2 612 | 162 795 |
| 1975 | 2 090 | 138 485 |
| 1976 | 2 159 | 155 422 |
| 1977 | 1 473 | 111 997 |
| 1978 | 1 417 | 117 572 |
| 1979 | 1 538 | 142 533 |
| 1980 | 2 016 | 187 776 |
| 1981 | 2 085 | 213 015 |
| 1982 | 2 289 | 263 350 |
| 1983 | 2 012 | 244 485 |
| 1984 | 2 066 | 252 893 |

*Lumber exported in association with newsprint exports.

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

Table 13. Licenced sawmill production, Newfoundland and Labrador, 1970 to 1982-83.

| Year | Production | | | Sawmills licenced |
|---|---|---|---|---|
| | Crown land | Private land | Total | |
| | thousands of $m^3$ | | | |
| 1970 | 44.5 | 37.4 | 81.9 | 1 010 |
| 1971 | 44.7 | 29.0 | 73.7 | 1 006 |
| 1972 | 58.3 | 13.0 | 72.3 | 1 085 |
| 1973 | 85.2 | 30.8 | 116.0 | 1 310 |
| 1974 | 63.1 | 23.4 | 101.7 | 1 387 |
| 1975-76 | 60.4 | 7.0 | 67.5 | 1 385 |
| 1976-77 | 75.4 | 12.6 | 87.9 | 1 443 |
| 1977-78 | 91.7 | 8.6 | 100.3 | 1 468 |
| 1978-79 | 91.2 | 23.6 | 114.9 | 1 600 |
| 1979-80 | 86.7 | 28.5 | 115.2 | 1 703 |
| 1980-81 | 76.6 | 19.0 | 92.6 | 1 780 |
| 1981-82 | 63.1 | 15.7 | 78.8 | 1 741 |
| 1982-83 | 64.0 | 13.5 | 77.5 | 1 824 |

Source: Newfoundland Department of Forest Resources and Lands.

Table 14. Sawmill statistics.

| Region and Year | $m^3$ 0–24 | No. of mills | $m^3$ 24–59 | No. of mills | $m^3$ 59–118 | No. of mills | $m^3$ 118–177 | No. of mills | $m^3$ 117–236 | No. of mills | $m^3$ 236–1180 | No. of mills | $m^3$ 1180 + | No. of mills | Total returns | Total Production $m^3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1979-80** | | | | | | | | | | | | | | | | |
| Eastern | 3 934 | 560 | 3 368 | 85 | 4 516 | 49 | 2 214 | 15 | 2 892 | 14 | 8 626 | 23 | 3 757 | 1 | 746 | 25 549 |
| Central | 1 443 | 247 | 1 323 | 35 | 3 242 | 36 | 2 791 | 19 | 2 019 | 10 | 15 616 | 28 | 25 484 | 10 | 385 | 51 919 |
| Western | 2 315 | 267 | 2 690 | 70 | 2 319 | 27 | 1 236 | 8 | 2 158 | 10 | 11 439 | 29 | 12 554 | 4 | 415 | 34 709 |
| Labrador | 217 | 36 | 528 | 13 | 336 | 4 | 293 | 2 | 0 | 0 | 1 622 | 2 | 0 | 0 | 57 | 2 995 |
| Total | 7 908 | 1 110 | 7 909 | 203 | 10 412 | 116 | 6 533 | 44 | 7 069 | 34 | 37 302 | 82 | 38 038 | 14 | 1 603 | 115 172 |
| | Actual total 115 172 $m^3$ - 100 returns outstanding - estimated total production 116 288 $m^3$. | | | | | | | | | | | | | | | |
| **1980-81** | | | | | | | | | | | | | | | | |
| Eastern | 3 754 | 550 | 4 070 | 102 | 3 973 | 49 | 2 064 | 14 | 3 927 | 19 | 9 033 | 24 | 0 | 0 | 758 | 26 821 |
| Central | 1 459 | 241 | 1 952 | 49 | 2 915 | 34 | 3 147 | 22 | 1 695 | 8 | 14 314 | 29 | 10 333 | 7 | 390 | 35 815 |
| Western | 2 693 | 326 | 3 178 | 78 | 2 463 | 31 | 1 356 | 9 | 2 229 | 11 | 7 568 | 17 | 8 471 | 3 | 475 | 27 958 |
| Labrador | 370 | 49 | 364 | 9 | 462 | 5 | 165 | 1 | 182 | 1 | 446 | 1 | 0 | 0 | 66 | 1 990 |
| Total | 8 276 | 1 166 | 9 564 | 238 | 9 813 | 119 | 6 733 | 46 | 8 033 | 39 | 31 360 | 71 | 18 804 | 10 | 1 689 | 92 583 |
| | Actual total 92 583 $m^3$ - 91 returns outstanding - estimated total production 94 400 $m^3$. | | | | | | | | | | | | | | | |
| **1982-82** | | | | | | | | | | | | | | | | |
| Eastern | 3 693 | 559 | 2 882 | 78 | 3 779 | 41 | 2 188 | 15 | 4 479 | 23 | 6 132 | 15 | 0 | 0 | 731 | 23 153 |
| Central | 1 504 | 253 | 1 628 | 44 | 2 924 | 33 | 2 053 | 14 | 2 731 | 13 | 11 094 | 23 | 11 620 | 7 | 387 | 33 553 |
| Western | 2 626 | 359 | 2 619 | 63 | 2 597 | 31 | 1 429 | 10 | 1 454 | 7 | 8 099 | 16 | 1 231 | 1 | 487 | 20 056 |
| Labrador | 343 | 58 | 290 | 7 | 400 | 5 | 121 | 1 | 437 | 2 | 425 | 1 | 0 | 0 | 74 | 2 015 |
| Total | 8 167 | 1 229 | 7 419 | 192 | 9 699 | 110 | 5 790 | 40 | 9 101 | 45 | 25 751 | 55 | 12 852 | 8 | 1 679 | 78 778 |
| | Actual total 78 778 $m^3$ - 62 returns outstanding - estimated total production 79 060 $m^3$. | | | | | | | | | | | | | | | |
| **1982-83** | | | | | | | | | | | | | | | | |
| Eastern | 3 590 | 547 | 3 701 | 99 | 4 274 | 49 | 2 386 | 16 | 2 199 | 11 | 5 480 | 16 | 0 | 0 | 738 | 21 629 |
| Central | 1 865 | 271 | 2 053 | 51 | 2 763 | 32 | 2 745 | 19 | 2 318 | 11 | 10 091 | 22 | 9 283 | 6 | 412 | 31 118 |
| Western | 3 357 | 409 | 3 055 | 76 | 2 761 | 35 | 1 789 | 12 | 385 | 2 | 10 273 | 13 | 1 211 | 1 | 558 | 22 832 |
| Labrador | 449 | 58 | 262 | 8 | 405 | 5 | 0 | 0 | 0 | 0 | 799 | 2 | 0 | 0 | 73 | 1 915 |
| Total | 9 262 | 1 285 | 9 071 | 234 | 10 203 | 121 | 6 920 | 47 | 4 901 | 24 | 26 643 | 63 | 10 494 | 7 | 1 781 | 77 495 |
| | Actual total 77 495 $m^3$ - 43 returns outstanding - estimated total production 77 880 $m^3$. | | | | | | | | | | | | | | | |

Source: Newfoundland and Labrador Department of Forest Resources and Lands.

Table 15. Estimated lumber production imports and consumption in Newfoundland 1969/70 to 1983/84.

| Year | Lumber production $m^3$* | Estimated imports $m^3$** | Estimated exports $m^3$*** | Apparent total consumption $m^3$ | Nfld. share of market % |
|---|---|---|---|---|---|
| 1969-70 | 64 919 | 108 176 | 3 583 | 169 512 | 38.3 |
| 1970-71 | 81 878 | 87 864 | 3 362 | 166 380 | 49.2 |
| 1971-72 | 73 668 | 142 661 | 2 821 | 213 508 | 34.5 |
| 1972-73 | 72 252 | 149 038 | 3 435 | 217 855 | 33.2 |
| 1973-74 | 115 977 | 128 017 | 3 112 | 240 882 | 48.1 |
| 1974-75 | 86 496 | 158 013 | 2 614 | 241 895 | 35.8 |
| 1975-76 | 67 456 | 244 224 | 2 092 | 309 588 | 21.8 |
| 1976-77 | 87 556 | 192 497 | 2 160 | 277 893 | 31.5 |
| 1977-78 | 100 300 | 148 093 | 1 474 | 246 919 | 40.6 |
| 1978-79 | 114 861 | 107 232 | 1 418 | 220 675 | 52.0 |
| 1979-80 | 116 288 | 99 910 | 1 539 | 212 234 | 53.6 |
| 1980-81 | 94 400 | 113 280 | 2 016 | 205 664 | 45.9 |
| 1981-82 | 79 060 | 85 266 | 2 087 | 162 016 | 48.7 |
| 1982-83 | 77 880 | 87 410 | 2 289 | 163 001 | 47.7 |
| 1983-84 | 79 000 | 119 098 | 2 066 | 196 032 | 40.3 |

*Production figures were taken from records of the Newfoundland and Labrador Department of Forest Resources and Lands.

**Lumber imports were estimated using Statistics Canada Catalogue 54-004 (International Vessel Traffic Statistics). These data are adjusted to account for the fact that only an estimated 90 percent of coastal shipments are recorded. In some years it was assumed that 88 percent of coastal shipments were recorded, depending on estimated container (rail) shipments.

***Exports consist of dunnage, lumber used as packing material for newsprint shipments.

Sources: Milne, G.R. 1984. The Newfoundland Sawmill and Planing Mill Industry 1981/82. Information Report N-X-221. Newfoundland Forest Research Centre, Environment Canada.

Statistics Canada Catalogue 54-004.

The Newfoundland and Labrador Department of Forest Resources and Lands.

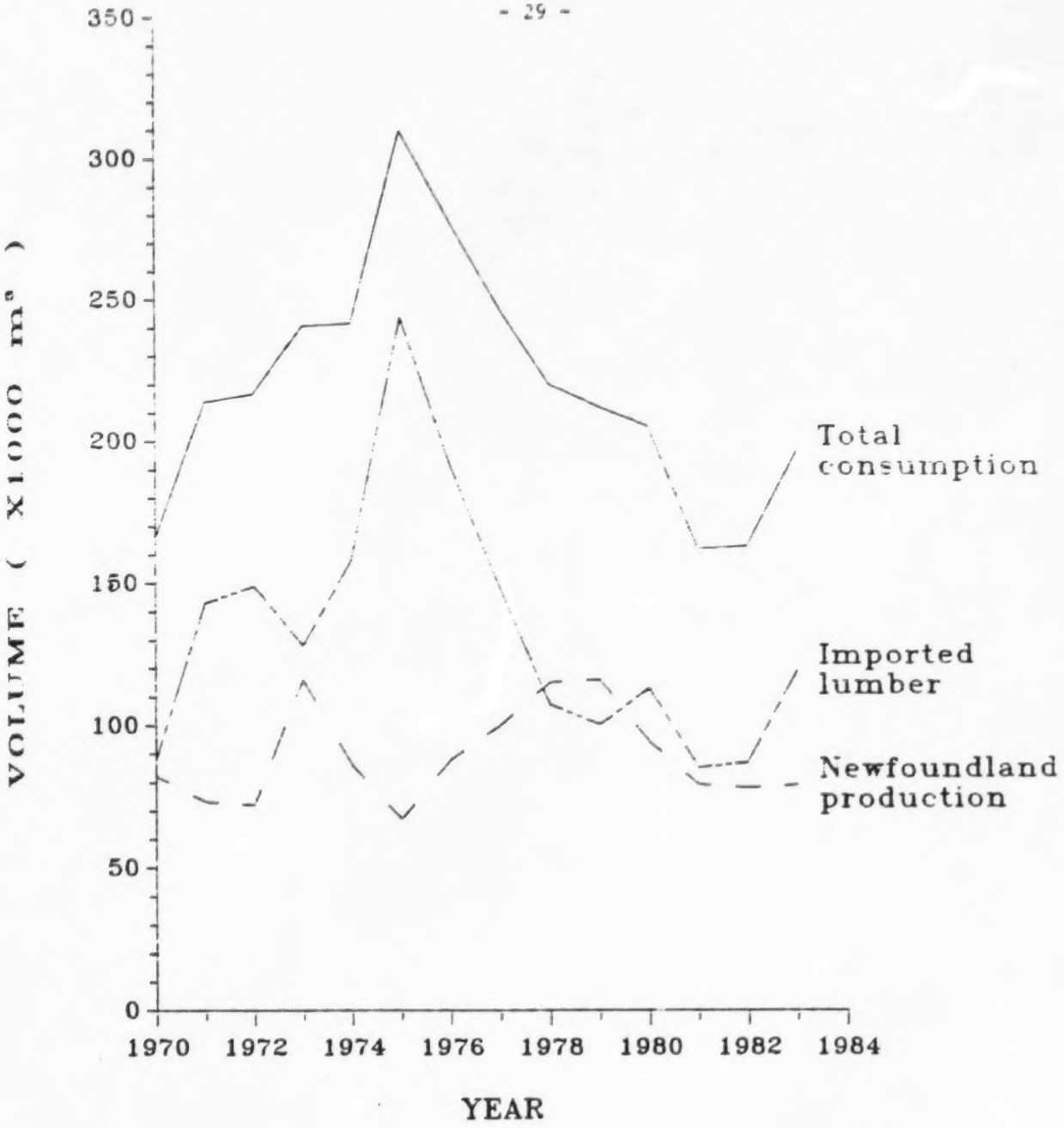


Figure 7. Newfoundland production, imported lumber and total lumber consumption.

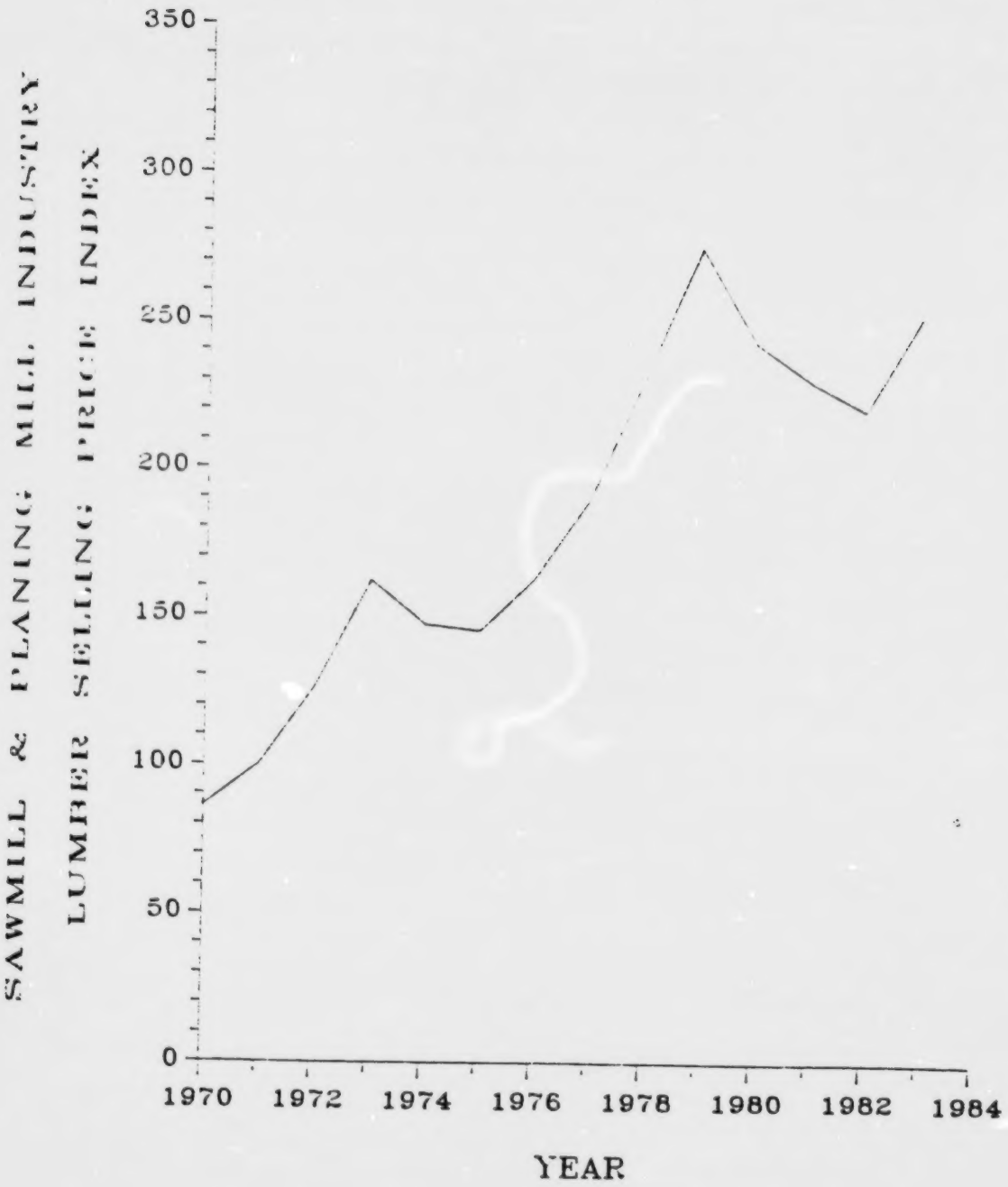


Figure 8. Industry lumber selling price index.

Table 16. Principal statistics for the total wood industry.

| Year | Number of establish. | Production-Related-Workers | | | Cost of fuel & electricity | Cost of Mat. and supplies | Value of shipments | Value added | Total Employees | | Value added |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Man hours '000 | Wages $'000 | thousands of dollars | | | | Number | Income $'000 | $'000 |
| 1970 | 73.0 | 368.0 | 791.0 | 1 453.0 | 189.0 | 3 198.0 | 5 140.0 | 2 334.0 | 429.0 | 1 776.0 | 2 317.0 |
| 1971 | 70.0 | 344.0 | 776.0 | 1 500.0 | 254.0 | 3 151.0 | 6 900.0 | 3 224.0 | 447.0 | 2 122.0 | 3 225.0 |
| 1972 | 71.0 | 349.0 | 795.0 | 1 720.0 | 243.0 | 4 179.0 | 7 709.0 | 2 989.0 | 448.0 | 2 316.0 | 2 987.0 |
| 1973 | 69.0 | 370.0 | 796.0 | 2 023.0 | 383.0 | 4 216.0 | 8 479.0 | 4 482.0 | 505.0 | 2 900.0 | 447.0 |
| 1974 | 77.0 | 375.0 | 804.0 | 2 602.0 | 642.0 | 5 562.0 | 11 275.0 | 5 039.0 | 538.0 | 3 959.0 | 5 133.0 |
| 1975 | 78.0 | 343.0 | 733.0 | 2 725.0 | 622.0 | 5 980.0 | 11 991.0 | 5 571.0 | 482.0 | 4 034.0 | 5 552.0 |
| 1976 | 59.0 | 324.0 | 672.0 | 2 874.0 | 469.0 | 7 854.0 | 12 709.0 | 4 386.0 | 392.0 | 3 708.0 | 5 327.0 |
| 1977 | 51.0 | 331.0 | 695.0 | 2 999.0 | 332.0 | 9 455.0 | 13 759.0 | 4 222.0 | 380.0 | 3 724.0 | 4 287.0 |
| 1978 | 56.0 | 364.0 | 761.0 | 3 637.0 | 417.0 | 10 685.0 | 17 148.0 | 6 345.0 | 414.0 | 4 432.0 | 6 313.0 |
| 1979 | 70.0 | 280.0 | 599.0 | 3 248.0 | 680.0 | 12 048.0 | 23 221.0 | 6 771.0 | 374.0 | 4 620.0 | 6 739.0 |
| 1980 | 63.0 | 264.0 | 556.0 | 3 425.0 | 670.0 | 12 103.0 | 18 268.0 | 6 520.0 | 330.0 | 4 790.0 | 6 622.0 |
| 1981 | 65.0 | 290.0 | 590.0 | 4 023.0 | 690.0 | 14 398.0 | 21 457.0 | 6 755.0 | 334.0 | 4 790.0 | 6 862.0 |
| 1982 | 63.0 | 228.0 | 452.0 | 3 161.0 | 893.0 | 10 262.0 | 16 794.0 | 6 194.0 | 263.0 | 3 799.0 | 6 201.0 |

Source: Statistics Canada Catalogue 25-202.

Table 17. Manufactured products.

| Year | Lumber '000 $m^3$ | Newsprint tonnes | Chips tonnes | Dunnage $m^3$ | Export pulpwood '000 $m^3$ | Linerboard tonnes |
|---|---|---|---|---|---|---|
| 1970 | 82 | 619 081 | 0 | 3 359 | 0 | 0 |
| 1971 | 74 | 686 261 | 0 | 2 819 | 0 | 0 |
| 1972 | 72 | 526 872 | 0 | 3 432 | 0 | 0 |
| 1973 | 116 | 624 967 | 4 698 | 3 110 | 0 | 90 178 |
| 1974 | 86 | 571 487 | 2 933 | 2 612 | 0 | 159 675 |
| 1975 | 67 | 432 379 | 4 916 | 2 090 | 0 | 97 725 |
| 1976 | 88 | 465 826 | 2 572 | 2 159 | 0 | 99 750 |
| 1977 | 100 | 558 389 | 4 358 | 1 473 | 13 | 122 973 |
| 1978 | 115 | 561 436 | 10 105 | 1 417 | 36 | 0 |
| 1979 | 114 | 597 099 | 8 695 | 1 538 | 101 | 0 |
| 1980 | 94 | 646 527 | 9 401 | 2 018 | 86 | 0 |
| 1981 | 79 | 675 118 | 8 322 | 2 087 | 48 | 0 |
| 1982 | 68 | 634 453 | 3 043 | 2 289 | 48 | 0 |
| 1983 | 79 | 561 294 | 13 781 | 2 012 | 35 | 0 |

Source: Statistics Canada Catalogue 25-202.

## 3. THE FOREST SECTOR IN NEWFOUNDLAND'S ECONOMY

The forest industry is vital to the provincial economy. In 1984 the forestry processing sector accounted for about 25 percent of all manufacturing employment and income in Newfoundland. Moreover, forestry processing generated almost 30 percent of the total manufacturing value of shipments while contributing 37 percent of the value added. The total value of shipments in 1984 was $315.4 million while the value added was $164 million. The pulp and paper sector accounts for about 90 percent of forestry manufacturing value added, value of shipments, total income, and gross domestic product (GDP).

The contribution of forestry in the primary sector is overshadowed by mining and fishing. Primary forestry activity does, however, contribute 2 percent to the provincial GDP. The pulp and paper industry generates almost 80 percent of primary forest sector output. Nationally, the Newfoundland industry contributes 2 percent to Canadian primary forest production.

On the Island, the direct employment attributed to forestry in 1985 was about 6 400, with total incomes of approximately $148 million. The forest sector also generates indirect employment chiefly in the petroleum, service, and supply sectors. Approximately 6 400 person years of indirect employment with an estimated income of $91 million are dependent on forestry. The forest sector has a significant impact in many areas of the Province. Although the official provincial unemployment rate in 1985 was 21.3 percent, it may range from 50-70 percent

in many rural communities. The pulp and paper industry is very important to economies of three of the largest communities in Newfoundland - Grand Falls, Corner Brook, and Stephenville. A significant portion of direct and indirect employment in and around these centres is attributed to the mills. In 1984, the industry produced approximately 650 000 tonnes of newsprint valued at $315 million.

As previously indicated, the Newfoundland sawmill industry consists of about 1850 small independent mills. Despite the size of the individual sawmills, collectively the industry is important to the provincial economy, especially in the regions where the mills are located. In 1981, 1356 person years of employment and $5.2 million in salaries were generated by the industry. The total value of shipments was $9.8 million while the value added to the provincial economy was $3.5 million.

The fuelwood industry has increased in size dramatically in the late 1970's and early 1980's with corresponding increases in fuel oil costs. In 1983, approximately 800 000 $m^3$ of wood were consumed for fuel. About 75 percent of the wood was harvested by domestic cutters while about 25 percent was harvested by commercial operators. In 1983, the sale of fuelwood by commercial operators generated approximately $2.0 million. However, the total value of fuelwood cut based upon commercial prices is approximately $18.4 million Commercial operations created up to 150 person years of employment in 1983.

The remaining wood industry activity is concentrated around the miscellaneous wood working sector. This sector consists of approximately 90 plants of various sizes manufacturing a wide range of wood products. In 1981, 521 people were directly employed in the industry earning a total income of $9.5 million. The total value added was $20.7 million, and the value of shipments was 33.8 million. With the introduction of local kiln drying technology and assuming modest improvements to the sawmill industry, the long-term outlook for the woodworking sector is optimistic.

In addition to direct and indirect benefits derived from the forest industry, the forests of Newfoundland and Labrador provide economic and social benefits in recreation activities, watershed protection and maintenance, wildlife habitat, amenity services, and other benefits which have traditionally been a mainstay in the Newfoundland and Labrador lifestyle.

Table 18. Comparison industries - Newfoundland
Gross domestic product at factor cost by sector.

| Year | Forestry | Forestry % of total | Mining | Agriculture | Fishing | Total |
|---|---|---|---|---|---|---|
| | | | Millions of dollars | | | |
| 1979 | 36.3 | 5.5 | 498.5 | 16.5 | 111.2 | 662.5 |
| 1980 | 44.8 | 7.1 | 461.4 | 13.5 | 111.9 | 631.6 |
| 1981 | 54.2 | 8.0 | 491.8 | 16.3 | 118.8 | 681.1 |
| 1982 | 55.4 | 10.4 | 334.2 | 19.3 | 122.6 | 531.5 |
| 1983 | 45.0 | 8.9 | 325.0 | 19.0 | 116.0 | 505.0 |
| 1984 | 60.0 | 10.7 | 380.0 | 22.0 | 100.0 | 562.0 |

Source: Newfoundland Statistics Agency.

Table 19. Forestry employment in Newfoundland.

| Sector | No. of employees person years | Average Wage* ($/person year) | Total wages $ |
|---|---|---|---|
| Primary | | | |
| Logging | 1700 | 21 160 | 35 972 000 |
| Forestry services | | | |
| term | 70 | 18 764‡ | 101 038 |
| seasonal | 400 | 15 000ϕ | 600 000 |
| Sub-Total | 2170 | | 36 673 038 |
| Manufacturing | | | |
| Pulp & paper | 2280 | 35 344 | 80 584 320 |
| Sawmills | 1350 | 14 950 | 20 182 500 |
| Wood industry | 580 | 18 153 | 10 528 740 |
| Sub-Total | 4210 | | 111 295 560 |
| TOTAL | 6380 | | 147 968 598 |

*Average wages were determined from Statistics Canada average annual earnings for Newfoundland, April 1985 SIC (Standard Industrial Classification) categories.

‡Term salaries for forestry services were determined from an average four week salary.

ϕSeasonal wages were determined using an average of $300/person week.

**Sources:**

Newfoundland and Labrador Department of Forest Resources and Lands,

Newfoundland Statistics Agency,

Milne, G.R. 1984. The Newfoundland Sawmill and Planing Mill Industry 1981/1982. Information Report N-X-221,

Statistics Canada Catalogues: 25-201, 25-202, 70-004.

Table 18. Comparison industries - Newfoundland
Gross domestic product at factor cost by sector.

| Year | Forestry | Forestry % of total | Mining | Agriculture | Fishing | Total |
|---|---|---|---|---|---|---|
| | | | Millions of dollars | | | |
| 1979 | 36.3 | 5.5 | 498.5 | 16.5 | 111.2 | 662.5 |
| 1980 | 44.8 | 7.1 | 461.4 | 13.5 | 111.9 | 631.6 |
| 1981 | 54.2 | 8.0 | 491.8 | 16.3 | 118.8 | 681.1 |
| 1982 | 55.4 | 10.4 | 334.2 | 19.3 | 122.6 | 531.5 |
| 1983 | 45.0 | 8.9 | 325.0 | 19.0 | 116.0 | 505.0 |
| 1984 | 60.0 | 10.7 | 380.0 | 22.0 | 100.0 | 562.0 |

Source: Newfoundland Statistics Agency.

Table 19. Forestry employment in Newfoundland.

| Sector | No. of employees person years | Average Wage* ($/person year) | Total wages $ |
|---|---|---|---|
| Primary | | | |
| Logging | 1700 | 21 160 | 35 972 000 |
| Forestry services | | | |
| term | 70 | 18 764‡ | 101 038 |
| seasonal | 400 | 15 000ϕ | 600 000 |
| Sub-Total | 2170 | | 36 673 038 |
| Manufacturing | | | |
| Pulp & paper | 2280 | 35 344 | 80 584 320 |
| Sawmills | 1350 | 14 950 | 20 182 500 |
| Wood industry | 580 | 18 153 | 10 528 740 |
| Sub-Total | 4210 | | 111 295 560 |
| TOTAL | 6380 | | 147 968 598 |

*Average wages were determined from Statistics Canada average annual earnings for Newfoundland, April 1985 SIC (Standard Industrial Classification) categories.

‡Term salaries for forestry services were determined from an average four week salary.

ϕSeasonal wages were determined using an average of $300/person week.

**Sources:**

Newfoundland and Labrador Department of Forest Resources and Lands,

Newfoundland Statistics Agency,

Milne, G.R. 1984. The Newfoundland Sawmill and Planing Mill Industry 1981/1982. Information Report N-X-221,

Statistics Canada Catalogues: 25-201, 25-202, 70-004.

Table 20. Selected forestry revenue. Newfoundland and Labrador fiscal years 1961-62 to 1983-84.

| Fiscal year | Sawmill licences | Timber rental | Timber royalties | Cutting permits | Forest management tax | Total revenue |
|---|---|---|---|---|---|---|
| | | | Dollars | | | |
| 1961-62 | 28 317 | 31 382 | 87 099 | - | - | 146 798 |
| 1961-63 | 27 014 | 31 367 | 80 465 | 7 594 | - | 146 440 |
| 1963-64 | 25 004 | 31 053 | 114 138 | 6 406 | - | 176 601 |
| 1964-65 | 26 702 | 31 046 | 138 429 | 5 451 | - | 201 628 |
| 1965-66 | 21 740 | 31 052 | 164 457 | 4 376 | - | 221 625 |
| 1966-67 | 21 330 | 31 083 | 129 442 | 4 468 | - | 186 323 |
| 1967-68 | 21 672 | 31 072 | 176 525 | 4 108 | - | 233 377 |
| 1968-69 | 23 547 | 31 078 | 121 180 | 4 478 | - | 180 283 |
| 1969-70 | 20 723 | 31 089 | 147 817 | 4 450 | - | 204 080 |
| 1970-71 | 19 240 | 31 064 | 196 762 | 4 239 | - | 251 306 |
| 1971-72 | 21 408 | 31 708 | 258 222 | 3 930 | - | 314 638 |
| 1972-73 | 25 021 | 12 703 | 109 000 | 4 296 | - | 151 020 |
| 1973-74 | 26 768 | 49 454 | 268 963 | 4 516 | - | 349 701 |
| 1974-75 | 31 000 | 49 454 | 733 585 | 5 512 | - | 819 551 |
| 1975-76 | 25 580 | 31 077 | 780 196 | 13 960ϕ | 871 000± | 1 721 813 |
| 1976-77 | 16 000 | 31 000 | 1 077 000 | 19 000 | 807 000 | 1 950 000 |
| 1977-78 | 29 000 | 24 000 | 294 000 | 23 000 | 743 000 | 1 113 000 |
| 1978-79 | 33 000 | 33 000 | 251 000 | 25 000 | 805 000 | 1 147 000 |
| 1979-80 | 34 000 | 32 000 | 276 000 | 40 000 | 892 000 | 1 274 000 |
| 1980-81 | 34 000 | 26 000 | 358 000 | 50 000 | 890 000 | 1 358 000 |
| 1981-82 | 35 000 | 27 000 | 388 000 | 60 000 | 951 000 | 1 461 000 |
| 1982-83 | 36 000 | 26 000 | 508 000 | 133 000* | 1 112 000 | 1 815 000 |
| 1983-84 | 38 000 | 29 500 | 682 000 | 164 000 | 1 100 000 | 2 013 500 |

Notes: ϕ - Rates for permits increased from $0.50 to $2.00 each.
± - This tax came into effect in 1975-76.
* - Rates increased from $2.00 to $5.00 each.

Source: Department of Forest Resources and Lands, Public Accounts, and Estimates of Revenue and Expenditure.

Table 21. Estimates of Federal corporate income tax paid by Newfoundland forest industry firms, 1974-83.

| Year | Sector | Federal tax paid ($) |
|---|---|---|
| 1974 | Forestry | 75 520 |
| | Wood Industry | 24 100 |
| | Paper and Allied Industry | 5 726 340 |
| | Total | 5 825 960 |
| 1975 | Forestry | 25 900 |
| | Wood Industry | 27 020 |
| | Paper and allied Industry | 4 131 050 |
| | Total | 4 183 970 |
| 1976 | Forestry | 38 710 |
| | Wood Industry | 23 440 |
| | Paper and Allied Industry | 96 800 |
| | | 158 950 |
| 1977 | Forestry | 20 140 |
| | Wood Industry | 23 520 |
| | Paper and Allied Industry | 2 482 500 |
| | Total | 2 526 160 |
| 1978 | Forestry | 32 200 |
| | Wood Industry | 30 200 |
| | Paper and Allied Industry | 8 888 010 |
| | Total | 8 950 410 |
| 1979 | Forestry | A* |
| | Wood Industry | A |
| | Paper and Allied Industry | A |
| | Total | - |

Cont'd. .....

Table 21 (Concl'd.)

| Year | Sector | Federal tax paid ($) |
|---|---|---|
| 1980 | Forestry | 94 200 |
| | Wood Industry | 56 880 |
| | Paper and Allied Industry | 13 360 000 |
| | Total | 13 511 080 |
| 1981 | Forestry | 79 200 |
| | Wood Industry | 57 330 |
| | Paper and Allied Industry | 12 499 200 |
| | Total | 14 718 930 |
| 1982 | Forestry | 80 800 |
| | Wood Industry | 54 600 |
| | Paper and Allied Industry | 614 600 |
| | Total | 750 000 |
| 1983 | Forestry | 59 500 |
| | Wood Industry | 81 300 |
| | Paper and Allied Industry | 372 000 |
| | Total | 512 800 |

*A - Where aggregation problems existed with source data no Newfoundland provincial figures could be estimated.

Source: Figures used in calculation of taxation estimates were taken from Statistics Canada Catalogue Number 61-208.

Estimates for 1974-78 were taken from: Milne, G.R. 1981. Estimates of the Taxes and Fees Paid by the Newfoundland Forest Industry Firms and Employees: 1974 to 1978. ISSN 0704-7657.

Table 22. Estimates of Provincial corporate income tax paid by Newfoundland forest industry firms, 1974-83.

| Year | Sector | Provincial Tax paid ($)± |
|---|---|---|
| 1974 | Forestry | 26 880 |
| | Wood Industry | 9 750 |
| | Paper and Allied Industry | 2 234 160 |
| | Total | 2 270 790 |
| 1975 | Forestry | 10 730 |
| | Wood Industry | 11 340 |
| | Paper and Allied Industry | 1 682 450 |
| | Total | 1 704 520 |
| 1976 | Forestry | 24 990 |
| | Wood Industry | 11 400 |
| | Paper and Allied Industry | 45 300 |
| | | 81 690 |
| 1977 | Forestry | 11 400 |
| | Wood Industry | 11 100 |
| | Paper and Allied Industry | 1 155 000 |
| | Total | 1 177 000 |
| 1978 | Forestry | 19 800 |
| | Wood Industry | 15 640 |
| | Paper and Allied Industry | 4 481 730 |
| | Total | 4 517 170 |
| 1979 | Forestry | 39 240 |
| | Wood Industry | X* |
| | Paper and Allied Industry | X |
| | Total | NA |

Cont'd. .....

Table 22 (Concl'd.)

| Year | Sector | Provincial tax paid ($)± |
|---|---|---|
| 1980 | Forestry | 52 080 |
| | Wood Industry | 30 240 |
| | Paper and Allied Industry | 7 754 600 |
| | Total | 7 836 920 |
| 1981 | Forestry | 57 720 |
| | Wood Industry | 30 240 |
| | Paper and Allied Industry | 7 269 640 |
| | Total | 7 357 600 |
| 1982 | Forestry | 73 800 |
| | Wood Industry | 30 000 |
| | Paper and Allied Industry | 329 140 |
| | | 442 940 |
| 1983 | Forestry | 57 600 |
| | Wood Industry | 47 160 |
| | Paper and Allied Industry | 276 080 |
| | Total | 380 840 |

*X - These values are unavailable due to confidentiality restrictions imposed upon Statistics Canada.

± Provincial Corporate taxes are determined under an assumption that the forestry sector and wood industries were taxed at 12% and paper and allied industries were taxed at 14%.

Source: Figures used in calculation of taxation estimates were from Statistics Canada Catalogue Number 61-208.

Estimates for 1974-78 were taken from: Milne, G.R. 1981. Estimates of the Taxes and Fees Paid by the Newfoundland Forest Industry Firms and Employees: 1974 to 1978. ISSN 0704-7657.

Table 23. Newfoundland and Labrador Department of Forest Resources and Lands expenditures.

| Year | Current | Capital | Total |
|---|---|---|---|
| | thousands of dollars | | |
| 1980-81 | 16 959 | 1 554 | 18 513 |
| 1982-82 | 23 385 | 2 618 | 26 003 |
| 1982-83 | 21 690 | 3 008 | 24 698 |
| 1983-84 | 23 117 | 4 862 | 27 979 |
| 1984-85 | 26 472 | 6 350 | 32 822 |
| 1985-86 | 28 517 | 4 606 | 33 123 |
| 1986-87[e] | 29 899 | 3 869 | 33 768 |

[e] = estimate.

Source: Newfoundland Statistics Agency.

Table 24. Unemployment rates unadjusted

| Year | Province | | | | | | | | | | National average Canada |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | B.C. | Alta. | Sask. | Man. | Ont. | Que. | N.B. | N.S. | P.E.I. | Nfld. | |
| 1970 | 7.7 | 5.1 | 4.2 | 5.3 | 4.4 | 7.0 | 6.3 | 5.3 | - | 7.3 | 5.7 |
| 1971 | 7.2 | 5.7 | 3.5 | 5.7 | 5.4 | 7.3 | 6.1 | 7.0 | - | 8.4 | 6.2 |
| 1972 | 7.8 | 5.6 | 4.4 | 5.4 | 5.0 | 7.5 | 7.0 | 7.0 | 10.8 | 9.2 | 6.2 |
| 1973 | 6.7 | 5.3 | 3.5 | 4.6 | 4.3 | 6.8 | 7.7 | 6.6 | - | 10.0 | 5.5 |
| 1974 | 6.2 | 3.5 | 2.8 | 3.6 | 4.4 | 6.8 | 7.5 | 6.8 | - | 13.0 | 5.3 |
| 1975 | 8.5 | 4.1 | 2.9 | 4.5 | 6.3 | 8.1 | 9.8 | 7.7 | 8.0 | 14.0 | 6.9 |
| 1976 | 8.6 | 4.0 | 3.9 | 4.7 | 6.5 | 8.7 | 11.0 | 9.5 | 9.6 | 13.3 | 7.1 |
| 1977 | 8.5 | 4.5 | 4.5 | 5.9 | 7.0 | 10.3 | 13.2 | 10.6 | 9.8 | 15.5 | 8.1 |
| 1978 | 8.3 | 4.7 | 4.9 | 6.5 | 7.2 | 10.9 | 12.5 | 10.5 | 9.8 | 16.2 | 8.3 |
| 1979 | 7.6 | 3.9 | 4.2 | 5.3 | 6.5 | 9.6 | 11.1 | 10.1 | 11.2 | 15.1 | 7.4 |
| 1980 | 6.8 | 3.7 | 4.4 | 5.5 | 6.8 | 9.8 | 11.0 | 9.7 | 10.6 | 13.3 | 7.5 |
| 1981 | 6.7 | 3.8 | 4.7 | 5.9 | 6.6 | 10.3 | 11.5 | 10.2 | 11.2 | 13.9 | 7.5 |
| 1982 | 12.1 | 7.7 | 6.2 | 8.5 | 9.8 | 13.8 | 14.0 | 13.2 | 12.9 | 16.8 | 11.0 |
| 1983 | 13.8 | 10.8 | 7.4 | 9.4 | 10.1 | 13.9 | 14.8 | 13.2 | 12.2 | 18.8 | 11.9 |
| 1984 | 14.7 | 11.2 | 8.0 | 8.3 | 9.1 | 12.8 | 14.9 | 13.1 | 12.8 | 20.5 | 11.3 |
| 1985 | 14.2 | 10.1 | 8.1 | 8.1 | 8.1 | 11.8 | 15.2 | 13.8 | 13.2 | 21.3 | 10.5 |

Source: Statistics Canada Catalogue 71-201.

Table 25. Dwelling starts by completions and under construction in Newfoundland and Labrador.

| Year | Total Starts | Single detached | Semi-detached and duplex | Row | Apartment & other | Completion | Under construction |
|---|---|---|---|---|---|---|---|
| 1970 | 2636 | 2204 | 76 | 184 | 172 | 2207 | 2535 |
| 1971 | 3658 | 2783 | 286 | 201 | 388 | 3429 | 2705 |
| 1972 | 3901 | 3229 | 171 | 167 | 334 | 3432 | 3435 |
| 1973 | 4831 | 4246 | 189 | 59 | 337 | 4478 | 3737 |
| 1974 | 4911 | 4037 | 134 | 561 | 179 | 4446 | 4173 |
| 1975 | 5342 | 3727 | 34 | 1064 | 517 | 4831 | 5107 |
| 1976 | 5709 | 4233 | 119 | 691 | 666 | 5850 | 4537 |
| 1977 | 3719 | 2531 | 140 | 85 | 963 | 4292 | 2878 |
| 1978 | 2865 | 2322 | 143 | 123 | 277 | 3561 | 3483 |
| 1979 | 2999 | 2658 | 65 | 88 | 188 | 2611 | 2850 |
| 1980 | 3848 | 3128 | 78 | 180 | 462 | 2986 | 3736 |
| 1981 | 3210 | 2345 | 112 | 278 | 475 | 3936 | 2966 |
| 1982 | 2793 | 2175 | 208 | 240 | 170 | 2331 | 3373 |
| 1983 | 3281 | 2776 | 201 | 100 | 204 | 3176 | 3494 |
| 1984 | 2720 | 2401 | 162 | 39 | 118 | 3134 | 3000 |
| 1985 | 1392 | 1190 | 42 | 28 | 132 | 1072 | 1271 |

Source: Statistics Canada Catalogue 64-002.

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